REMARKS

Claims 1-5 and 9-11 are now pending in the application. Claims 6-8 and 12-23 are hereby canceled without prejudice or disclaimer of subject matter contained therein. The Applicant reserves the right to further prosecute the subject matter of the present application, including any canceled claims in subsequent division, continuation, and/or continuation-in-part application(s). Reconsideration is respectfully requested.

Rejections Under 35 U.S.C. § 112, 2nd Paragraph

Claim 3 was rejected under 35 U.S.C. § 112, 2nd Paragraph, as being indefinite in view of the recitation "XAD polymer" which is considered to be a trademark.

Claim 3 is amended to recite: "a hydrophobic polyaromatic polymer, and an acrylic ester polymer," the generic equivalents of "XAD polymers." A person of skill in the art would recognize the generic equivalent from at least product literature of the supplier, Sigma-Aldrich (a copy is submitted on an accompanying IDS).

Claims 1-5 and 9-11 were rejected under 35 U.S.C. § 112, 2nd Paragraph, as being indefinite because Claims 1 and 10 recite differing definitions of R1 and R2.

Claim 10 is hereby amended to recite definitions of R1 and R2 to conform to the recitations of Claim 1.

The instant amendment does not add new matter. In view of the present amendments, the Applicants respectfully request the withdrawal of the rejections under 35 U.S.C. § 112, 2nd Paragraph.

Rejections Under 35 U.S.C. § 103(a)

Claims 1-5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Richter (WO02/096553) in view of Richter (US2004/0147396), or Blanch (AU 2002302117) in view of Kim (EP 1,094,065). The Patent Office contends that the claims differ from Richter or Blanch only in the specificity of the R1 and R2 groups. The Patent Office further contends that Kim discloses the recited R1 and R2 groups as

suitable for packing materials in a chromatography column. Applicants respectfully traverse this rejection for reasons that follow.

Richter discloses a silica gel chromatography packing wherein the packing comprises a cucurbituril coating adsorbed onto a silica gel. In contrast, the present invention discloses and claims a cucurbituril covalently bonded to a particulate, polymeric resin.

Kim discloses that cucurbituril (CB) may be used as a substitute for cyclodextrin and the CB is suitable for packing materials of a chromatography column. However, Kim does not specifically teach R_1 groups of formula 1 useful for packing materials of a chromatography column. Cucurbiturils of formula 1 may be covalently bonded to particle-type polymers with reactive end substituted groups only if R_1 of formula 1 has a definition claimed in claim 1.

The physical coating, disclosed by Richter, is not covalently bound. Therefore, it is limited in its reproducibility and its chemical and physical stability. These limitations are overcome by the covalent bonding of the present invention. Kim does not supply the teaching missing from Richter. Kim discloses a cucurbituril physically adsorbed to a polymer matrix. However, Kim does not disclose the covalent attachment of a cucurbituril to a Merrifield or and XAD polymer using a covalent linkage facilitated by an R1 or R2 group as defined by the present invention.

Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Richter (WO02/096553) in view of Richter (US2004/0147396), or Blanch (AU 2002302117) in view of Kim (EP 1,094,065), and further in view of Haase (5,276,062). The Patent Office contends that Haase teaches that the Amberlite XAD resins are the most preferred class of polymer for adding affinity compounds. However, Haase does not supply the teaching missing from Richter because Richter relates to a non-covalent adsorption process and not a covalent linkage as taught by the present invention. Moreover, Haase does not teach a curcurbituril having the claimed R1 and R2 groups.

Claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Richter (WO02/096553) in view of Richter (US2004/0147396), or Blanch (AU 2002302117) in view of Kim (EP 1,094,065), and further in view of Snyder. The Patent Office contends that Snyder teaches the particle-size range of the present invention. However, Snyder does not complete Richter because Snyder is silent as to covalently linking a cucurbituril to a polymer.

Claims 1-5 and 9-11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Richter (WO02/096553) in view of Richter (US2004/0147396), or Blanch (AU 2002302117) in view of Kim (EP 1,094,065), and further in view of Duval (6,042,723). The Patent Office contends that the claims differ from Richter or Blanch only in reciting a product by process limitation of being formed from a reactive polymer. However, Duval does not teach the covalent attachment of a cucurbituril to a reactive polymer.

Claim 4 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Richter (WO02/096553) in view of Richter (US2004/0147396), or Blanch (AU 2002302117) in view of Kim (EP 1,094,065), and further in view of Snyder and Duval. As discussed above, neither Snyder nor Duval supply the teaching missing from the principle reference. Neither Snyder nor Duval relate to the covalent linkage of a cucurbituril to a XAD polymer.

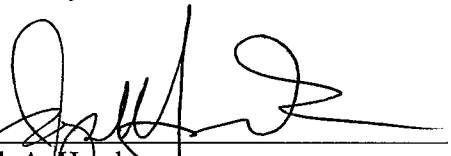
Conclusion

In view of the foregoing, applicants respectfully submit that all outstanding rejections have been overcome. Reconsideration and allowance are therefore respectfully solicited.

In the event the Examiner believes an interview might serve to advance the prosecution of this application in any way, the undersigned attorney is available at the telephone number noted below.

The Commissioner is hereby authorized to charge any fees or credit any overpayment associated with this communication, including any extension fees or fees for the net addition of claims, to Deposit Account No. 02-2135.

Respectfully submitted,

By: 

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